

Response

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Serial No.: 10/626,341

Confirmation No.: 9160

Filed: 24 July 2003

For: AMIDE-FUNCTIONAL POLYMERS, COMPOSITIONS, AND METHODS

Remarks

The Office Action mailed 5 May 2005 has been received and reviewed. No claims having been amended or added, and claims 8-58 having been withdrawn by the Examiner, the pending claims are claims 1-58. Reconsideration and withdrawal of the rejections are respectfully requested.

The 35 U.S.C. §102(e) Rejection

The Examiner rejected claims 1-7 under 35 U.S.C. §102(e) as being anticipated by Samra et al. (U.S. Patent No. 6,538,089 B1). Applicants respectfully traverse this rejection.

"[F]or anticipation under 35 U.S.C. §102, the reference must teach *every aspect* of the claimed invention either explicitly or impliedly." M.P.E.P. §706.02 (emphasis added).

Applicants respectfully submit that claims 1-7 are not anticipated by Samra et al. because such document does not teach each and every aspect of the claimed invention. Samra et al. disclose a "physically cross-linked copolymer formed from monomers comprising: a) N-isopropyl acrylamide (NIPAAM); b) a hydrogen bonding monomer comprising 2-hydroxyethyl methacrylate (HEMA); and c) styrene" (e.g., claim 9). In brief, the monomers recited in claim 9 of Samra et al. have all been polymerized. Thus, Samra et al. do not teach a reactive polymer including a "pendant ethylenically unsaturated group" (e.g., independent claims 1 and 3) or "ethylenically unsaturated pendant groups" (e.g., independent claim 6).

As such, Applicants respectfully submit that claims 1-7 are not anticipated by Samra et al. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §102(e).

The 35 U.S.C. §103(a) Rejection

The Examiner rejected claims 1-7 under 35 U.S.C. §103(a) as being unpatentable over Bae et al. (U.S. Patent No. 5,262,055) or Meier et al. (U.S. Patent No. 6,616,946 B1). Applicants respectfully traverse this rejection.

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"To establish a *prima facie* case of obviousness . . . the prior art reference (or references when combined) must teach or suggest all the claim limitations." M.P.E.P. §2143. Applicants respectfully submit that the cited documents do not teach or suggest all of the language recited in the present claims.

Specifically, Bae et al. disclose a "thermosensitive polymer . . . made from the polymerization of at least one monomer selected from the group consisting of N-isopropylacrylamide, N,N-diethylacrylamide, N-acryloylpiperidine, N-methylmethacrylamide, N-ethylmethacrylamide, N-n-propylacrylamide and N-(3'-methoxypropyl)acrylamide" (e.g., claim 9). In brief, the monomers recited in claim 9 of Bae et al. have all been polymerized. Thus, Bae et al. fail to teach or suggest a reactive polymer including a "pendant ethylenically unsaturated group" (e.g., independent claims 1 and 3) or "ethylenically unsaturated pendant groups" (e.g., independent claim 6).

Specifically, Meier et al. disclose that "[o]ligomers of NIPAAm (or other vinyl monomers) having a reactive group at one end can be prepared by the radical polymerization of NIPAAm using AIBN as initiator, plus a chain transfer agent with a thiol (H--SH) group at one end and the desired "reactive" group (e.g. --OH, --COOH, --NH₂) at the other end" (e.g., column 5, lines 34-39). In brief, the monomers recited in Meier et al. have all been polymerized. Thus, Meier et al. fail to teach or suggest a reactive polymer including a "pendant ethylenically unsaturated group" (e.g., independent claims 1 and 3) or "ethylenically unsaturated pendant groups" (e.g., independent claim 6).

As such, Applicants respectfully submit that claim 1-7 are not obvious over Bae et al. or Meier et al. Applicants respectfully request reconsideration and withdrawal of the rejection.

Request for Rejoinder

Claims 8-58 have been withdrawn by the Examiner from further consideration as being drawn to a non-elected invention. Since the restricted claims are directed to methods of making

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and using polymers containing polymerized NIPAAM, and compositions thereof, Applicants respectfully request reconsideration and withdrawal of the Restriction Requirement.

In the event the Examiner maintains the restriction requirement, Applicants respectfully request rejoinder of the non-elected claims.

For example, claims 8-14 are directed to methods of making polymers containing polymerized NIPAAM and a pendant ethylenically unsaturated group. Claims 44-56 are directed to a method of using a polymer as recited in claim 1. Upon an indication of claim 1 being allowable, Applicants respectfully request that method claims 8-14 and 44-56 also be rejoined and examined pursuant to M.P.E.P. §821.04. *See, for example, In re Ochiai*, 71 F.3d 1565, 37 USPQ2d 1127 (Fed. Cir. 1995) and *In re Brouwer*, 77 F.3d 422, 37 USPQ2d 1663 (Fed. Cir. 1996).

Further, claims 24-33 are directed to compositions including reactive polymers as recited in claim 1. Thus, claim 1 is a linking claim. "Any claim(s) directed to the nonelected invention(s), previously withdrawn from consideration, which depends from or includes all the limitations of the allowable linking claim must be rejoined and will be fully examined for patentability." M.P.E.P. §809. Upon an indication of claim 1 being allowable, Applicants respectfully request that composition claims 24-33 also be rejoined and examined pursuant to M.P.E.P. §809.

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Summary

It is respectfully submitted that all the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for
Mahfuza B. ALI et al.

By
Mueeting, Raasch & Gebhardt, P.A.
P.O. Box 581415
Minneapolis, MN 55458-1415
Phone: (612) 305-1220
Facsimile: (612) 305-1228

August 3, 2005
Date

By: [Signature]
Loren D. Albin
Reg. No. 37,763
Direct Dial (612) 305-1225

CERTIFICATE UNDER 37 CFR §1.8:

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 3rd day of August, 2005, at 11:25a.m. (Central Time).

By: [Signature]
Name: Rachel Gagliardi-Gibson